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from Krauss & Pempel, "Beyond Bilateralism"

When Strong Ties Fail

U.S.-JAPANESE MANUFACTURING RIVALRY IN ASIA

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Introduction

Competition between Japanese and U.S. manufacturers used to be a simple game. In highly stylistic terms, it worked something like this: members of each team battled among themselves for position on the home court and, via exports and foreign direct investment (FDI), on the opposing team's court; the winning team was the one that, in the aggregate, controlled the largest share of sales in the two markets.[1]

Today, however, the game has become much more complex—thanks in large part to the emergence of Asia as a global center for the production and export of manufactured products.[2] (In 2000, even as it struggled to overcome the lingering effects of the Asian financial crisis of 1997–98, the region—not including Japan—accounted for 17 percent of global exports.[3]) Over the past fifteen years, Japanese and U.S. manufacturers have shifted a significant share of their production capacity to places such as Taipei and Tianjin, Bangkok and Batam, and have tried to build competing networks across the region. In short, the contest between Japanese and U.S. producers has spilled over into Asia.

Who is winning and why? In this chapter, I try to answer those questions by examining two very different industries in Asia: automobiles and computer peripherals. In both of these industries, Japanese multinational corporations (MNCs) tried to replicate the close, mutually reinforcing, and exclusionary ties they had constructed at home, but they achieved much more success in the automobile sector. The uneven outcomes can be attributed to two factors: host country policies, particularly trade and industrial policies; and technological conditions. While strong network ties have given Japanese MNCs an edge in the auto sector, which has been heavily protected and subsidized by host governments in Asia and tends to evolve through incremental innovation, they actually have hindered the performance of Japanese MNCs in the computer industry, which has been relatively unprotected by governments in Asia and, as a "new" industry, is still developing in sudden bursts of innovation.[4] Put simply, strong ties work in a closed regime facing a relatively stable technological environment but fail in an open regime facing a relatively unstable technological environment.

For U.S.-Japan bilateral relations, this analysis suggests a significant departure from the past. In the 1980s and early 1990s, government officials from the two countries routinely squared off, face to face, over contentious trade issues in these critical sectors. The United States demanded, for example, that Japan impose voluntary restraints on its automobile exports to the United States, and pushed Japan to reserve a share of its semiconductor market for "Made in the U.S.A" chips. Today, the two states enthusiastically support (and in Japan's case, even coordinate and guide) their own multinationals as they compete for market share in neutral Asia, but they do so largely from the sidelines—as cheerleaders (the U.S.) and coaches (Japan), not as combatants. A battle still rages, only now it assumes the shape of a private contest.

The chapter is organized as follows: The next two sections present a cursory analysis of the costs and benefits of different kinds of business networks, and then briefly discuss the multinationalization of such networks. This discussion is followed by a case study of the automobile industry in Southeast Asia, which has been dominated by Japanese MNCs, and a case study of the computer industry in Asia, where Japanese MNCs are now struggling to catch up with U.S. rivals. The final section concludes the chapter with a discussion of the analytic insights that flow from these two case studies.

Business Networks

Economic sociologists have demonstrated that most transactions do not occur in the atomistic, impersonal market of neoclassical economic theory or inside the expanding hierarchies described by neo-institutionalists such as Williamson;[5] rather, they occur in the large, gray domain of social relationships that exists between these two extremes.[6] That is, exchange usually takes place in some kind of relational network.

A network conditions and is conditioned by individual and corporate

behavior. It does not merely respond to price signals from outside or to commands from above; rather, it generally reflects the specific configuration of ties that bind its members. In more technical terms, a network is a relatively durable governance structure linking three or more actors, each of whom occupies a node or point of contact. Relationships among these actors are reciprocal or interdependent, but not necessarily equal. That is, each actor is able to access the others inside the network, although often not instantly and often not without passing through other nodes.

Much of the empirical study of business networks has targeted East Asia[7] and, above all, Japan. For example, Gerlach[8] as well as Imai and Kaneko[9] have written about the Japanese economic system as a web of mutually reinforcing networks held together by cooperative ties between nominally independent firms. They focus their attention on *keiretsu*, business groups whose members are linked through cross-shareholding, interlocking directorates, personnel transfers, and interfirm transactions. The Japanese government, which has helped launch and sustain a variety of interfirm networks,[10] openly endorses this view. Japanese capitalism, according to one government study, is different in that it "emphasizes the merits of cooperation based on long-term relationships between economic actors and within economic institutions. In this way, each economic actor has been able to avoid the risks associated with fierce competition, maximizing its self-interest by forging alliances within the market."[11]

But business networks are not confined to Japan, or even to East Asia. They appear throughout the world, and scholars have studied manifestations of relational or informal contracting in, for example, Silicon Valley's software industry, Sweden's special steel industry, and northern Italy's bicycle, food processing machinery, and woodworking tool industries.[12] What distinguishes Japan (and perhaps South Korea and Taiwan as well) is not the presence of business networks, but the durability and intensity of interfirm ties. In a nutshell, these ties tend to be much stronger in Japan than in the United States and, to a lesser extent, Europe. Aldrich and Sakano conducted a cross-national survey of small business networks in Japan, the United States, Italy, Northern Ireland, and Sweden, and concluded that Japanese networks make up "a more closely tied, relatively circumscribed system than networks in other nations. Once a relationship is established, consultation and information-seeking go around within the circumscribed network."[13]

Business networks present a trade-off between transaction costs and information costs. By forging stable relationships, firms are able to curb the costs of securing, monitoring, and enforcing contracts; at the same time, however, they face higher costs to obtain information about economic opportunities outside the network. The stronger the relational ties

are, the lower will be the transaction costs and the higher the information costs.[14]

Mindful of this trade-off, Håkansson notes that strong ties facilitate trust and interdependence, binding members of the network to one another, but they may also yield a lock-in effect, inhibiting members from assimilating new information and discouraging them from exploring and utilizing alternative resources. In such cases, the network will serve as an "obstacle to change."[15]

Likewise, in his study of the apparel industry in New York City, Uzzi finds that firms characterized by "embeddedness" (strong, mutually reinforcing ties with one another) outperformed other, more independent firms—but only up to a threshold point, when the positive effect suddenly turned sharply negative. He concluded:

> A crucial implication is that embedded networks offer a competitive form of organizing but possess their own pitfalls because an actor's adaptive capacity is determined by a web of ties, some of which lie beyond his or her direct influence. Thus a firm's structural location, although not fully constraining, can significantly blind it to the important effects of the larger network structure, namely its contacts' contacts."[16]

In his study, Uzzi does not identify this threshold point where the costs of strong ties begin to overwhelm the benefits. In general, though, we can assume that the information impactedness[17] associated with strong ties will become too costly when a firm finds itself in a market characterized by a high level of uncertainty—a result of either fierce price competition or rapidly changing technology.

Cross-Border Networks

In their foreign as well as their domestic operations, firms routinely use networks to reduce transaction costs. Manufacturers, in particular, often allocate different production processes to different locations, "slicing up the value chain" according to the comparative advantage (and more specifically, the technological endowment) of each location.[18] For example, a multinational corporation may allocate its most labor-intensive activity to a host economy with a relatively large supply of cheap labor, and may establish other affiliates—or contract with suppliers—to produce key components in different economies with relatively large supplies of skilled engineers and technicians. Parts are then shipped across borders.

This pattern of networking is particularly common in Asia, where indigenous technical skills vary dramatically from one economy to the next.

TABLE 7.1
Thai Automobile Sales (January–June 1997)

Maker	Passenger Vehicles	Commercial Vehicles	One-Ton Pickups	Total Vehicles	Percentage of Market
Toyota	35,235	5,299	37,022	77,556	31.2
Isuzu	595	6,861	46,628	54,084	21.8
Nissan	6,760	2,469	22,011	31,240	12.6
Mitsubishi	6,842	2,272	16,132	25,246	10.2
Honda	21,002	n/a	719	23,084	9.3
Mazda	1,142	1,502	6,968	9,612	3.9
All Others	16,191	11,079	1,456	27,363	11.0
Total	87,767	29,482	130,936	248,185	100.00

SOURCE: Automotive Resources Asia (Bangkok).

Both Japanese and U.S. MNCs have established intrafirm production networks in the region, especially in the electronics industry. But empirical studies repeatedly show that Japanese affiliates in Asia are tightly tethered to the parent company in Japan. That is, they belong to vertically organized intrafirm networks that are held together by extraordinarily strong relational ties, and thus are, according to Itami, "integrated extensions of domestic production systems."[19] Indeed, Sedgwick suggests that Japanese manufacturers in Thailand "are part of a tightly controlled and rigorously hierarchical organizational structure extending down from Japan."[20]

Compared with their U.S. counterparts, Japanese manufacturing affiliates operating overseas also tend to forge stronger interfirm ties—usually with other Japanese MNCs (including, on occasion, erstwhile competitors) and often with the Japanese state acting in a supporting role as a kind of broker. In some cases, Japanese manufacturers have tried to draw on horizontal keiretsu ties, hooking up with the local or regional affiliate of their Japanese main bank to borrow funds or using the overseas affiliate of the general trading company in their group for logistical support. In many other cases, they have tried to recreate vertical keiretsu ties, encouraging their Japanese subcontractors to follow them in locating abroad and to continue supplying components from these new overseas manufacturing facilities. These parts supply networks have become widespread in Asia, which is by far the favorite destination for Japanese subcontracting firms investing overseas.[21]

Observed behavior thus indicates that Japanese regional production networks differ from their American counterparts in much the same way that domestic network structures in Japan differ from those in the United States. Simply stated, the former are held together by stronger ties. Given

TABLE 7.2
Indonesian Automobile Sales (January–July 1997)

Maker	Passenger Vehicles	Commercial Vehicles	Total Vehicles	Percentage of Market
Toyota	4,711	52,760	57,471	23.5
Mitsubishi	1,029	44,271	45,300	18.5
Suzuki	5,904	37,601	43,505	17.8
Isuzu	None	31,889	31,889	13.0
Daihatsu	5	24,420	24,425	10.0
Timor	11,785	None	11,785	4.8
All Others	16,191	11,079	27,363	12.4
Total	42,015	202,637	244,652	100.00

SOURCE: Gaikindo (Indonesian Automobile Manufacturers Association).

what Doremus, Keller, Pauly, and Reich refer to as "the enduring influence" of national institutions and norms on the behavior of multinational corporations, this conclusion should not surprise us.[22] Even as they expand into Asia, Japanese and American MNCs remain fundamentally Japanese and American.

The Automobile Industry in Asia

For the past three decades, Japanese MNCs have dominated the automobile industry in Asia, particularly Southeast Asia.[23] In the combined markets of the four core members of the Association of Southeast Asian Nations, or the ASEAN 4 (Thailand, Indonesia, Malaysia, and the Philippines), Japanese manufacturing affiliates accounted for as much as 95 percent of local production in 1970 and for 91 percent in 1997,[24] and their parent companies in Japan accounted for the lion's share of imports. As Table 7.1 shows, in the first half of 1997, just before the Asian economic crisis erupted, five Japanese firms controlled 85 percent of the Thai market for vehicles. Table 7.2 provides comparable data for Indonesia, where the former Suharto regime contracted with a Korean automaker for production of a national car, the Timor.[25] Although the Timor enjoyed a number of advantages, five Japanese firms still controlled about 83 percent of the Indonesian automobile market in the first half of 1997.[26]

Japanese automakers initially acquired such a dominant position in this region because their primary rivals at the time, the former Big Three of the United States (General Motors, Ford, and Chrysler), abandoned it in the 1970s as they scrambled to defend market share at home, where cheaper

Japanese imports were becoming increasingly popular. Southeast Asia seemed relatively inconsequential at the time, but eventually came to boast the world's fastest growing automobile market. Domestic production in the ASEAN 4 nearly quadrupled between 1985 and 1996, increasing from 365,000 units to 1.42 million units.[27] Thailand in particular emerged as an important center of automobile assembly and parts production.

Unsurprisingly, the region's phenomenal growth attracted the attention of non-Japanese manufacturers. At the lower end of the market, Korean automakers, led by Daewoo, moved aggressively into transitional economies such as Vietnam, where Japanese firms did not already have a chokehold, and tried to gain sufficient production experience and scale for a broader offensive in the region. The Asian financial crisis, however, stymied these plans. In 1999, Daewoo went bankrupt after failing to service the huge debt it had incurred in its massive expansion program.

A more serious and sustained threat came from U.S. automakers, which struggled in the late 1980s and throughout the 1990s to return to the region. But as we shall see, they began to acquire a foothold only at the very end of the decade, when they purchased significant shares in a few financially strapped Japanese firms.[28] How did Japanese automakers continue to dominate markets in the region for so long? The answer is that they built production networks based on strong, even exclusionary ties that held up over time, thanks in large part to host-country policies.

Intrafirm Networks

To be competitive, automobile manufacturers must achieve economies of scale, which means that the marginal cost of production declines as total output increases. Until the late 1980s, the nationally organized automobile industries of Southeast Asia fell woefully short of fulfilling this requirement. Due to import substitution policies adopted by governments in Thailand, Indonesia, Malaysia, and the Philippines, each industry was highly protected and thus cut off from others in the region, leaving manufacturers to sell virtually all of their output in relatively small, well-protected domestic markets. Most factories produced fewer than 10,000 vehicles a year—well below the 200,000 units that industry analysts consider necessary to achieve economies of scale and thereby efficient mass production.[29]

Beginning in the late 1980s, Japanese automakers tried to overcome this constraint by building intrafirm networks across the region. These networks treat all of Southeast Asia as a single market and allocate different production functions to different plants in the region based on an intrafirm division of labor. Toyota, for example, produces diesel engines

and pressed parts in Thailand, gasoline engines in Indonesia, steering gears and electronics in Malaysia, and transmissions in the Philippines. Parts are swapped between the different affiliates, which then assemble them—along with other components—into finished cars and trucks. Toyota's regional network has expanded dramatically since 1993, when it handled only $25 million in parts. Three years later, in 1996, it was moving nearly $200 million in parts.[30]

Although Toyota has set up a regional trading center in Singapore to oversee the daily movement of these standardized parts, the parent company in Japan continues to coordinate the overall network. One way it does this is by rotating key personnel in and out of Toyota affiliates in Asia and requiring them to communicate daily with headquarters. "Even in cases like Indonesia and the Philippines, where we do not have a majority of the equity, we are able to aggressively send in our own management team and maintain control," boasts Yokoi Akira, Toyota's vice president for international affairs.[31]

Toyota is not unique in this regard; all parent companies in the Japanese automobile industry try to maintain strict control over their operations in Asia. Nakashima, who studied operations inside the Thai affiliate of Mitsubishi Motors, notes that the affiliate (Mitsubishi Sittipol) slavishly followed the parent company's human resource rules and procedures. "This is not because the local department and other managers lack the ability to devise a new system, but because they are not given the authority to do so."[32]

To support the creation of cross-border production networks, Southeast Asian governments have adopted a series of regional trade promotion schemes, each one more ambitious than the last.[33] All of these schemes benefit well-established insiders at the expense of outsiders trying to export into the region. In 1988, for example, the four core members of ASEAN approved the Brand-to-Brand Complementation (BBC) scheme, which gave automakers a 50 percent tariff reduction on parts exchanged between their Southeast Asian plants for the production of a particular kind of vehicle.[34] Then, in 1996, association members enacted the ASEAN Industrial Cooperation (AICO) scheme to further trim tariffs on approved products traded within the region. (Most of the applications for AICO status have come from Japanese automakers or parts suppliers.) They have also endorsed the ASEAN Free Trade Agreement (AFTA), which will cut tariffs on most products imported from other countries in the region to 5 percent or less. More recently, ASEAN agreed to study the option of expanding its free trade agreement to include Japan, China, or both.[35]

Japanese MNCs have led efforts to implement not only these trade initiatives but also a number of ASEAN-wide industrial promotion efforts

that treat automobile manufacturing as a regionally rather than nationally organized industry. As Legewie puts it, they "have become the decisive actors over time by partly taking over the formulation of industrial policies at the ASEAN level."[36] One must note, however, that Japanese firms have been strongly supported in these efforts by the Japanese state, which has assumed a kind of coordinating role.[37]

For example, the Ministry of Economy, Trade, and Investment (METI)—better known by its former name, the Ministry of International Trade and Industry, or MITI—has sponsored an annual meeting of automobile experts from Japan and ASEAN countries to discuss regionwide promotional policies for this industry.[38] It has also prodded the Japan Automobile Manufacturers Association (JAMA) to organize a regionwide trade association—the ASEAN Automotive Federation (AAF)—"with a view to enhancing the intra-regional cooperation of automobile industries."[39] According to industry representatives, AAF is JAMA's voice in Southeast Asia; indeed, its first president was the head of Toyota Motors Thailand.[40]

Interfirm Networks

Economies of scale are not enough to ensure competitiveness in automobile manufacturing. Business scholars suggest that efficient automakers must now go beyond large-scale mass production ("Fordism"); they must demonstrate an ability to engage in flexible specialization ("post-Fordism")—the careful production and assembly of thousands of high value-added components.[41] This requires backward linkages to upstream suppliers of parts.

But supporting industries in Southeast Asia have been woefully underdeveloped. Until the 1990s, assemblers in Indonesia, for example, could choose from only a few dozen parts suppliers located in that country while their counterparts in Japan could call on a few thousand. "We had a very narrow supply base," says Herman Latif, chairman of Gaikindo (the Association of Indonesian Automotive Industries).[42] As a result, he says, the industry in Indonesia had been made up of firms that screw together imported parts rather than firms that actually manufacture vehicles.

Japanese automakers have not only built elaborate production networks spanning national borders in Southeast Asia; but within the region's different economies, they have also forged increasingly strong ties with local parts suppliers—most of which happen to be Japanese transplants. Indeed, these assemblers have tried to replicate, wherever practical, the vertical keiretsu networks they built so carefully, over so many years, at home in Japan. In the 1990s, as they struggled to comply with

domestic content requirements and to reduce their own production costs, Japanese MNCs operating in places like Jakarta and Bangkok leaned hard on their domestic suppliers to follow them into Southeast Asia. This pressure yielded dramatic results: in just seven years (1991 through 1997), Japanese auto parts producers made 223 investments in the ASEAN 4 countries of Indonesia, Thailand, Malaysia, and the Philippines; earlier they had taken twenty-nine years (1962 through 1990) to make only 182 investments in those countries.[43]

Japanese transplants quickly came to dominate supporting industries in each of these countries. One statistic from Indonesia may put this in perspective. In the late 1990s, fifty-three joint ventures with foreign capital accounted for virtually all of the production of key components for that country's automobile industry; of these supply firms, forty-six (or 85 percent of the total) were Japanese joint ventures.[44]

At the same time, supply clubs emerged throughout Southeast Asia. Organized by Japanese assemblers and filled with Japanese subcontractors, these clubs carry the same name as the vertical keiretsu in Japan after which they are patterned. Thus, in Thailand, Nissan has its Thai Takara-kai, made up almost entirely of the local affiliates of its most trusted Japanese subcontractors; Mitsubishi Motors has its Thai Kashiwa-kai; Toyota has its Thai Kyōhō-kai; and so on.

Because of the limited size of the automobile market in each host country in the region, Japanese subcontractors who invested in Southeast Asia would never have been able to achieve their own economies of scale by supplying only their main keiretsu customer. By necessity, then, they supplied multiple customers—at least at first. But by the mid-1990s, when auto markets in host countries began to expand quite rapidly, transaction patterns long established in Japan began to take shape in the region. Nishioka concludes that, "with the exception of those cases in which an established supplier has stayed home, we find very few examples of Japanese automakers [in Southeast Asia] engaging in transactions outside their established keiretsu groups."[45] This trend was particularly evident in Thailand, the region's fastest growing automobile market. Thus, Kasahara argues that Japanese automakers in Thailand are seeking to capture "relational quasi-rents" by conducting almost all of their business with Japanese subcontractors who belong to their parent firm's keiretsu network.[46]

Consider the case of Toyota Motors Thailand, which relies almost exclusively on parts produced by its keiretsu suppliers in Japan or on parts produced by the transplants of those suppliers in Thailand. Table 7.3 lists the thirty-two Japanese members of the Toyota supply club in Thailand in 1997. The list includes the Thai affiliates of most of Toyota's major sub-

TABLE 7.3
Japanese Members of Toyota Supply Club in Thailand

Name of Thai Affiliate	Parts Produced	Year Established in Thailand	Name of Japanese Parent	Does Parent Belong to Toyota Keiretsu?
Aoyoma Thai	Metal fasteners	1965	Aoyama	Y
Bangkok Foam	Interior trim	1971	Inoac Corporation	Y
Thai Bridgestone	Tires, tubes	1969	Bridgestone	Y
CI-Hayashi	Carpeting	1993	Hayashi	Y
Denso Thailand	Alternators, regulators	1974	Denso	Y
Enkei Thai	Aluminum wheels	1987	Enkei	N
Siam GS Battery	Batteries	1970	Nihon Denchi	Y
Inoue Rubber	Industrial rubber parts	1970	Inoac Corporation	Y
Kallawis Autoparts	Wheels	1973	Chuo Hatsujo	Y
NHK Spring Thailand	Seats, springs	1963	Nihon Hatsujo	Y
Nippon Paint Thailand	Paint	1968	Nippon Paint	Y
National Thai Co.	Car radios	1961	Matsushita	Y
Ogihara Thailand	Pressed parts	1990	Ogihara	N
Pioneer Electronics	Car stereos	1991	Pioneer	Y
Sunstar Chemical	Pressed parts	1989	Sunstar Engineering	N
Siam Aishin	Brake drums	1996	Aishin	Y
Siam Furukawa	Batteries	1992	Furukawa Denchi	Y
Siam Kayaba	Shock absorbers	1996	Kayaba	Y
SNC Soundproof	Soundproofing	1994	Nihon Tokushu Toryo	Y
Thai Auto Works	Body parts	1988	Toyota Autobody	Y
Thai Arrow Products	Wire harness	1963	Yazaki	Y
TCH Suminoe	Upholstery	1995	Suminoe Orimono	Y
TG Pongpara	Steering wheels	1995	Toyoda Gosei	Y
Thai Koito	Headlamps	1986	Koito	Y
Thai Kansai Paint	Paint	1970	Kansai Paint	Y
Thai Parkerizing	Metal coating	1979	Nihon Parkerizing	N
Thai Seat Belt	Seat belts	1994	Tokai Rika Denki	Y
Thai Steel Cable	Control cables	1981	Nihon Cable Systems	Y
Thai Stanley Electric	Signal lamps	1981	Stanley	Y
Thai Safety Glass	Windshield, windows	1988	Asahi	Y
Toa Shinto	Paint	1989	Shinto Toryo	Y
Yuasa Battery	Batteries	1963	Yuasa	Y

contractors in Japan—from Denso to Kallawis, from Aishin to Kayaba, from NHK Spring to Koito. In fact, the parents of all but four of these affiliates belong to Toyota's supply club in Japan.

Toyota and other Japanese automakers in Southeast Asia do purchase parts from indigenous suppliers that are not joint ventures with foreign firms. But even these suppliers are, for the most part, tied to Japan because they produce the specified part under a strict technology licensing agreement with the assembler's preferred keiretsu supplier in Japan. In the late 1990s, Siam Motors—Nissan's affiliate in Thailand—bought only one item (a muffler-tail pipe unit) from a completely independent supplier.[47]

Host states in Southeast Asia have tried hard to promote supporting industries in their own countries. In doing so, however, they have relied heavily on Japanese policy advice—a fact that has tended to benefit those local suppliers already holding, or willing to cultivate, strong equity or technical ties with Japanese suppliers. Thailand's Board of Investment (BOI), for example, has established its own BOI Unit for Industrial Linkage Development (BUILD) with offices in Tokyo and Osaka as well as Bangkok. In the automobile sector, "we try to encourage joint ventures that will improve our supply base by attracting investment and technology from Japan," according to a BUILD official.[48]

For its part, the government of Japan has acted as a kind of matchmaker, fostering ties between host country firms hoping to improve their capabilities and Japanese firms offering capital, technology, or both. This objective is reflected in the names of regional schemes pursued by METI: Local to Local Meetings, the Asia Industrial Network Project, the Asia Supporting Industry Action (ASIA) Program, the Supporting Industry Promotion Project, and the Roving Automotive Expert Dispatch Scheme.[49] Under this last program, the Japanese state is tapping its Official Development Assistance (ODA) to underwrite the cost of sending Japanese engineers and managers to Thailand, Indonesia, Malaysia, and the Philippines to advise local parts suppliers on ways to upgrade production and management practices.

The Effect on Competition

For outsiders attempting to set up competing operations in Southeast Asia, these exclusionary network structures built by Japanese MNCs represented a significant barrier to entry.[50] Consider the case of Chrysler (now Daimler-Chrysler), which wanted to set up its own production facilities in several locations throughout the region in the early 1990s. It approached leading parts suppliers, all of which happened to be Japanese

transplants belonging to various keiretsu groupings, but was repeatedly stymied in efforts to negotiate solid contracts. Tim Suchyta, then director of Chrysler's regional operations, tells what happened:

> We had some outright rejections that made absolutely no business sense at all. In Malaysia, for example, we had an AC [air conditioning] supplier who simply refused to have anything to do with us. It seemed pretty clear that he had been instructed to just say no.[51]

In the mid-1990s, General Motors (GM) encountered a similar problem when it tried to set up a factory in Thailand. The U.S. manufacturer went from breathless enthusiasm (announcing at the outset that it would assemble eighty thousand units of the Opel Zafira in 1996 and eventually capture as much as 10 percent of the region's auto market) to bitter disappointment. "A number of suppliers said they could not do business with us," recalls a GM executive.[52] The firm was so frustrated that it decided to ask the Thai government to waive a stringent (54 percent) requirement for domestic content, thereby allowing GM to source components from around the world. To the surprise of many,[53] the Thai government agreed. This decision reflected the government's growing frustration with the reluctance of Japanese MNCs to transfer technology and localize management. Indeed, in 1995, the Thai Board of Investment had begun to complain openly about this and invited Western MNCs to enter the Thai automobile market "through joint ventures with wholly owned Thai firms with minimal keiretsu ties."[54]

To hold onto their strong positions in the face of persistent efforts by U.S. and European MNCs to enter markets in Southeast Asia, Japanese MNCs began to collaborate with one another in ways they would not or could not in Japan. For example:

- In 1995, Toyota, Nissan, and Isuzu agreed to jointly establish casting plants and other facilities in Thailand to produce cylinder heads, cylinder blocks, connecting rods, camshafts and crankshafts used there in the assembly of pickup trucks. "To compete against American and European producers, we needed to find a way to reduce costs even further," explained Hiroyuki Tezuka, president of Siam Toyota Motors, which produces cylinder blocks for the three automakers.[55]
- In 1994, Mitsubishi Motors and Suzuki Motors teamed up to use common components for the passenger trucks they independently—and competitively—assemble in Indonesia. Mitsubishi agreed to contribute left-side doors, while Suzuki agreed to contribute right-side doors.[56]

- In 1993, Honda and Isuzu reached an agreement to compensate for weaknesses in their respective menus of automobile models. In Thailand, this means that Honda sells a repackaged Isuzu pickup called the Tourmaster while Isuzu offers a born-again Honda Civic called the Vertex.[57]

These horizontal ties raised entry barriers even higher for non-Japanese MNCs. But in the late 1990s, U.S. and European automakers finally found a way to crack the Japanese-dominated markets of Southeast Asia: they bought major, often controlling interests in Japanese automobile firms that had run up staggering debts and thus desperately needed capital. Renault purchased 37 percent of the outstanding shares of Nissan, which had fallen into a $21 billion debt.[58] Daimler-Chrysler bought 37 percent of the shares of Mitsubishi Motors, which had fallen into a $14 billion debt. General Motors likewise increased its stake in Suzuki (20 percent) and Isuzu (49 percent), while Ford did the same with its investment in Mazda (33 percent). After years of struggling, mostly in vain, to enter the region via "greenfield" investments (investments in mainly new assets), Western MNCs became, almost overnight, well-established insiders through these mergers and acquisitions.

The competition is far from over, however. Toyota and Honda, now Japan's number one and number two automakers, respectively, and the only remaining purely Japanese vehicle manufacturers, continue to use strong ties to compete in Asia. This was especially evident during the region's fiscal crisis, when Toyota and Honda rushed to the defense of their beleaguered keiretsu suppliers in Southeast Asia. Both companies provided financial assistance to regional subcontractors in the form of advance payments and cash for short-run expenses, such as the lease of equipment; they assigned to Asian affiliates some of the production chores that had until then been done entirely in Japan; and they dramatically boosted the import of parts from struggling parts suppliers in Asia.[59] This allowed Toyota and Honda to maintain or even strengthen their positions in the region. Meanwhile, some of the newly Westernized automakers retreated a step or two. Nissan, for example, yielded control of its affiliate in the Philippines to Yulon Motors, Nissan's joint venture partner in Taiwan.[60]

The Computer Industry in Asia

Asia has become the low-cost production center for world-class electronics firms from Japan and the United States (as well as Korea and Taiwan),

and now accounts for 51 percent of global exports in this field.[61] Like the automobile sector, the region's electronics industry is growing rapidly. But unlike the automobile industry, it is not—with the glaring exception of consumer electronics—wholly dominated by Japanese MNCs.[62] Indeed, in personal computers and some computer-related subsectors such as semiconductors, information storage devices (hard disk drives, floppy disk drives, and CD-Rom drives), keyboards, and power supply units, Japanese manufacturers have, since the late 1980s, lost ground to U.S. rivals at the higher end of the market and to Korean and Taiwanese rivals at the lower end. This has occurred in spite of efforts by the Japanese government to support and, in some cases, even subsidize Japanese electronics firms expanding into Asia, and to provide guidance to host countries formulating policies for the information technology sector.[63]

Consider the hard disk drive (HDD) industry. U.S. producers dominate the global market—thanks in large part, according to McKendrick, Doner, and Haggard, to the fact that they moved early into Southeast Asia (and then China) and established dynamic networks in a region blessed with relatively productive labor and relatively high agglomeration economies.[64] In 1990, U.S. manufacturers like Seagate, Connor Peripherals, Unisys, and Western Digital were using their plants in Southeast Asia, especially in Singapore, to assemble more than half of all their HDDs; by 1995 that percentage had climbed to 67 percent. Japanese firms, by contrast, began the decade producing only a tiny fraction of their HDDs in Southeast Asia; 90 percent of their global production remained in Japan. Over the next five years, Japanese producers like Fujitsu, NEC, Hitachi, and Toshiba rushed into the region (especially Thailand and then later the Philippines), which by 1995 came to account for 55 percent of their global output.[65] But these Japanese networks in the HDD industry have been unable to close the gap with their American-owned competitors. Japanese firms still account for only 15 percent of global output in the HDD industry; American manufacturers account for 85 percent.[66]

While the HDD case is revealing, it is also somewhat exceptional in that U.S. producers never faced a serious challenge. This was quite different in the case of semiconductors (or integrated circuits). In the late 1980s, it looked like this industry would go the way of televisions, VCRs, and stereo systems—industries in which U.S. producers established dominant positions in global markets, only to be edged out by Japanese rivals enjoying access to cheap capital. But U.S. semiconductor manufacturers have staged a dramatic comeback. By 1998, they accounted for 33.9 percent of global production capacity, while Japanese firms accounted for 29.6 percent. (Asian firms, primarily Taiwanese and Korean manufacturers, accounted for another 27.3 percent, while European firms accounted for the remaining 9.2 percent).[67] In 1999, three of the five biggest semiconductor manufacturers in the world (Intel, Motorola, and Texas Instruments) were headquartered in the United States, and they alone accounted for nearly a quarter of global sales.[68] U.S. chipmakers managed to achieve this success by moving into more complex, more technology-intensive lines such as flash memory; by forging ties with offshore foundries, especially in Taiwan; and by establishing their own facilities in Asia. Leachman and Leachman estimate that by 2004, U.S. semiconductor manufacturers will have twice as much production capacity in Asia as their Japanese rivals.[69]

Why have Japanese manufacturers of computer peripherals failed to keep up with, let alone outpace, their American rivals in Asia? McKendrick, Doner, and Haggard, focusing on the HDD industry, conclude that it was merely a strategic oversight: "Although Japanese companies were aware of the U.S. production shift to Southeast Asia and the resulting competition in their domestic market, they did not follow suit."[70] As a result of slow (or late) movement, the Japanese ostensibly missed a critically important business opportunity. Conversely, Borrus argues, the answer has more to do with the continued use of now-outmoded business practices in an increasingly global industry characterized by shorter and shorter product cycles: "Japanese production networks boasted redundant investment and remained relatively closed, even as the U.S. networks became more open and entwined with indigenous producers, with each link in the U.S. network chains becoming more specialized."[71] The evidence gathered for this study supports Borrus's conclusion. It suggests rather clearly that the strong, even exclusionary ties that aided Japanese automakers in Asia have simultaneously hurt Japanese producers of computer peripherals in the region.

Intrafirm Networks

To an even greater extent than their counterparts in the automobile industry, Japanese firms in the computer industry have built tightly integrated production networks across Asia that link the parent company's technology-intensive, prototype manufacturing plant in Japan to moderately sophisticated facilities in such places as Taiwan and Singapore, as well as to low-cost facilities in such places as Thailand and the Philippines. The cohesive nature of these networks can be seen in the high level of intrafirm trade between parent companies and their affiliates in Asia, as well as between related affiliates located in different countries in the region. In a 1998 study of sales and procurements by Japanese electronics

affiliates in Asia, MITI found that intrafirm channels handled 88.9 percent of electronics exports to Japan and 59.5 percent of such exports to third countries in Asia. It also found that these channels absorbed 86.6 percent of electronics imports from Japan and 45.9 percent of such imports from third countries in Asia.[72]

In most cases, the parent company in Japan carefully controls this vertically organized network of complementary and specialized production nodes across the region. As a result, local affiliates usually cannot exercise decision-making authority over critical issues such as procurement and sales, technology licensing, financing, and long-term business strategy. Ernst, for example, notes that Japanese electronics firms in Asia have, at least in the past, sought to "minimize risk and organize their production networks in a highly centralized manner."[73]

This tight control is clearly evident in personnel practices. The parent company in Japan tends to dispatch its own trusted managers to run operations in Asia, relegating local staff to supporting roles. In Singapore, Chia conducted a comparative study of Japanese and U.S. electronics manufacturers and found that the American firms had proceeded much more quickly to localize management: "Most of the senior management of [U.S.] companies surveyed were completely non-U.S., with positions filled by Singaporeans and other Asians. For the Japanese firms, however, top management was invariably Japanese."[74] Wong came to the same conclusion: "Still today, there is not a single Japanese electronics manufacturing plant in Singapore where the topmost manager is not a Japanese. . . . In contrast, many U.S. electronics firms in Singapore have promoted indigenous Singaporeans to the most senior management post in their Singaporean manufacturing operations. . . . "[75]

This contrast between American and Japanese electronics manufacturers is evident in other host countries as well. In Thailand, the leading HDD manufacturer—Seagate, a U.S. firm—relies heavily on local Thai managers, as well as on Singaporeans, to run its facility, while Fujitsu, the number two producer of HDDs, continues to use primarily Japanese staff dispatched from the home office.

Interfirm Networks

Computers have far fewer and far more standardized parts than automobiles. Thus, it should come as no surprise to learn that Japanese manufacturers of computer peripherals have not built the same kind of extensive, multitiered subcontracting networks that Japanese automakers have built. But compared to their U.S. counterparts, Japanese computer parts producers do forge very strong ties with key suppliers—even as they

operate overseas. In Asia, this characteristic manifests itself in close relationships between Japanese transplants.

In Singapore, where indigenous suppliers tend to possess solid technical skills, Wong reports that such firms have faced greater difficulty securing contracts with Japanese electronics firms than with U.S. firms. While the latter have shown "greater willingness to try out local indigenous suppliers of various precision engineering parts and contract manufacturing services," Japanese firms have preferred to use their own suppliers who have set up operations in Singapore.[76] In the Philippines, Tecson notes, Japanese MNCs in the HDD industry rely almost exclusively on other Japanese MNCs, including fellow keiretsu members, for components and subassemblies.[77] And in Thailand, the author's own fieldwork revealed the same. Japanese affiliates contract routinely with local or regional suppliers, but these suppliers are in almost all cases Japanese transplants, and many of them are affiliates of keiretsu members in Japan.

Consider the case of Melco Manufacturing Thailand (MMT), which in the late 1990s was producing 600,000 floppy disk drives per month. It was importing high-tech electronic components such as semiconductors, stepper motors, and condensers from Japanese affiliates in Singapore, and obtaining magnetic parts, resistors, and cable from Japanese affiliates in the Philippines and Thailand. Many of these Japanese suppliers, such as Mitsubishi Metals, are the Thai affiliates of Melco keiretsu members in Japan. "In recent years, as supporting industries have expanded into Thailand from Japan, we have had a growing contribution from Japanese suppliers," explains MMT's managing director.[78] "For the most part, these suppliers are very familiar with the way we do things because their parent companies work with our parent company in Japan."

The Effect on Competition

In Asia, which is rapidly emerging as the leading production center for the global personal computer (PC) industry, Japanese manufacturers of computer peripherals have pursued a losing strategy by building relatively closed networks based on strong relational ties. They have failed to tap into a low-cost supply base composed of indigenous producers, and until quite recently have also failed to forge synergistic linkages with technically sophisticated Taiwanese and Korean producers in the OEM (Original Equipment Manufacturing) market. By contrast, U.S. MNCs have pursued a winning strategy by setting up more open and flexible networks based on what Takeuchi refers to as "growing complementation with Asia."[79] That is, American manufacturers have specialized in high value-added operations such as integrated circuit (IC) design and

delegated less knowledge-intensive functions to their Asian partners. Borrus describes the payoff in the following terms:

> [T]he turn to skilled but cheaper Asian suppliers helped to lower overall production costs, fierce competition within the supply base helped to reduce turnaround times, and specialization and diversity within the network permitted U.S. producers to keep better pace than Japanese rivals with rapid technological and market shifts. Growing Asian technical capabilities freed U.S. firms to focus their efforts (and scarce resources) on new product definition and standards competition, systems integration, software value-added and distribution. In the bargain, the U.S. networks helped to spawn and sustain direct Asian competition to Japanese firms in several of their stronghold markets. . . . [80]

Japanese electronics firms have lost some ground in Asia, but they have not been entirely eclipsed in the region—or in the rest of the world. Indeed, they seem to have made some progress in recent years by moving, at the margins, to open up their networks. Although Japanese affiliates in the region continue to obtain most of their parts from Japanese sources (either via imports from the Japanese parent company and its home country suppliers or from Japanese parts suppliers in the host country), they now contract more often with Asian firms for OEM supplies.[81] In the mid-1990s, for example, Taiwanese manufacturers began producing monitors, motherboards, and other computer parts for Japanese computer giant NEC, while Taiwanese foundries began churning out memory chips for Japanese producers such as Toshiba and Fujitsu.[82]

It might be wise, however, to question how robust this trend really is. Evidence indicates that Taiwan and Silicon Valley are far more tightly integrated than Taiwan and Tokyo; in 1998, 51 percent of Taiwan's semiconductor foundry capacity was used to serve clients in the United States, while less than 7 percent served clients in Japan.[83] It also seems that some Japanese MNCs used outsourcing merely as a stopgap measure until they could forge their own strategic alliances,[84] or until Japanese-owned production facilities in China came on line in the late 1990s.[85]

Conclusion

Paradoxically, strong ties allowed Japanese automakers to hold onto market power in Southeast Asia, keeping U.S. rivals at bay for many years; but such ties also served to undermine the competitive position of Japanese manufacturers of computer peripherals in the region. This paradox is explained by the different characteristics of the two industries—characteristics that determine the net impact of strong ties.

Closed Versus Open Regimes

Host states in Southeast Asia have protected and nurtured national automakers, including the manufacturing affiliates of foreign firms. Tariffs on automotive imports have been high, and only recently have begun to fall. In Indonesia, for example, the tariff on fully assembled passenger cars was 200 percent, until June 1999, when it fell to 65–80 percent (depending on engine size). The tariff is now 35–50 percent on knocked-down vehicles (assembled as a kit) and 15 percent on automotive parts used in local assembly.[86] Indonesia, as well as neighboring states in Southeast Asia, did agree in 1992 to establish an ASEAN Free Trade Area, an ambitious scheme to sharply reduce tariffs on most trade within the region. But in the wake of the Asian fiscal crisis, members of ASEAN (with the exception of Thailand) reneged on their pledge to liberalize auto trade. Malaysia was particularly concerned about the impact of liberalization on its national brands, Proton and Perodua. Likewise, the Philippines delayed the elimination of local content requirements in the automobile industry, originally scheduled for January 2000, until the end of 2004.[87]

In the computer and semiconductor industries, by contrast, Asian states imposed relatively light tariffs through most of the 1990s, and then, with the advent of the WTO's Information Technology Agreement, agreed to eliminate them completely in January 2000.[88] Interestingly, the crisis of 1997 and 1998 did not dissuade them. Unlike the way they have waffled on measures to open up automobile markets, host states have not abandoned their commitment to free trade in computer-related industries.

This difference in levels of protection reflects the fact that the automobile industry in Asia is geared primarily for domestic and, to a lesser extent, regional markets, while the electronics industry is geared for regional and global markets. In other words, the latter is far more export-oriented. In Thailand, for example, manufacturers of electronic components export about 95 percent of their total output, while automakers—who have struggled mightily to cultivate overseas markets since 1997, when the domestic market collapsed—now export 38 percent.[89]

Stable Versus Unstable Technological Conditions

Vehicle manufacturing, while relying on an increasingly large number of electronic inputs, remains a relatively stable, oligopolistic industry requiring economies of scale and thus mass production. It belongs to the "old economy" of capital-intensive production.

The manufacturing of computer peripherals, however, is different. Consider the HDD industry. It is characterized by extremely short product cy-

cles, now estimated to be six to nine months, and rapidly declining unit prices. McKendrick, Doner, and Haggard note that prices of 3.5 disk drives have fallen at a rate of 1 percent per week, "prompting some managers to complain that they are in the fish business: products on the shelf begin to stink."[90] Technology changes constantly, and often does so in dramatic fits and starts. Design improvements have expanded storage capacity at lower and lower costs: a little more than a decade ago, the average per-megabyte cost of a disk drive was $11; in 1998, it was less than 5 cents.

The Net Impact of Strong Ties

While strong ties generate familiarity and trust, and thereby reduce transaction costs, they also generate a "stickiness" that translates into higher information costs as firms respond more slowly to price signals and technological change. In the case of the automobile industry in Southeast Asia, which is relatively closed and characterized by technological stability, the strong ties of Japanese MNCs yielded greater transaction cost reductions than information cost increases. But in the computer peripherals sector, which is relatively open and characterized by technological uncertainty and uneven development, a similar set of strong ties yielded greater information cost increases than transaction cost reductions. Thus, strong ties helped Japanese firms edge out their American rivals in the automobile industry in Asia but hurt them in their efforts to compete effectively in computer-related industries.

U.S.-Japan Relations

The U.S. and Japanese governments, aware of the large and growing consumer markets and export platforms for automobiles and computer peripherals in Asia, have tried to help their own multinational corporations (that is, MNCs headquartered in their respective countries) compete in these key sectors. The U.S. government's role, to be sure, has been far more circumscribed. Unlike Japanese bureaucrats, who have aggressively and proactively used industrial policies to guide and coordinate manufacturing FDI to and in the region, U.S. officials have resigned themselves to playing firemen by trying to help private firms and their executives fix problems after they have already occurred.[91]

Neither government, however, has managed to win the game for its home team. In the computer sector, a highly globalized industry, Japanese guidance did not boost the competitive position of Japanese firms in the region. Indeed, by encouraging strong ties between Japanese firms, state guidance may have weakened the position of Japanese MNCs in Asia.

The Japanese government was far more successful with automobiles—but only because it operated under the protective shade of host governments trying hard to build up national auto industries. Even then, Japan was unable to stop U.S. and European automakers from eventually buying their way into Japanese automobile networks.

This suggests that while Japanese and U.S. firms will continue to wage a pitched battle for pivotal markets in Asia, the Japanese and U.S. governments may gradually assume a lower profile. This is especially true as industries, including automobiles, become less and less national. Indeed, the two home governments may have to withdraw entirely from the field, acting, if at all, only through host governments that can actually influence the outcome of a private competition. Thus, as Japanese and U.S. MNCs expand further and further into neutral (or third) territories such as Asia, the bilateral bargaining that characterized the 1980s and early 1990s is likely to become less and less common.

57. Full figures on Singapore banks' overseas lending are not disclosed. For details on their exposure to Korea, Indonesia, Thailand, Malaysia, the Philippines, and Thailand, see Monetary Authority of Singapore, "Regional Exposure and NPLs."

58. In 2000, the world's top five ODA donors were Japan ($13.5 billion), the United States ($9.9 billion), Germany ($5 billion), the United Kingdom ($4.5 billion), and France ($4.1 billion). See Organization for Economic Cooperation and Development, "ODA Steady in 2000," Table 1.

59. A summary of the changing orientation of Japanese aid and official assistance is given in Katada, *Banking on Stability*, 41–47.

60. Ministry of Foreign Affairs, *Japan's ODA Annual Report 1999*, Chart 42.

61. Masuyama, "The Role of Japan's Direct Investment," 243–46; Ministry of Economy, Trade and Industry, "Present State of MITI-Related Economic Cooperation." Details of Japan's aid to Asia under the New Miyazawa Initiative and the Chiang Mai Initiative are available at [http://mof.go.jp/english/if/if.htm#uu].

62. See Hatch, chap. 7, this volume.

63. These details are based on annual surveys of manufacturing sector companies by the Japan Bank for International Cooperation (formerly the EXIM Bank). The survey is relatively large (501 companies with 7,710 overseas affiliates responded in 2001) and has a comparatively good response rate (63 percent in 2001). See Japan Bank for International Cooperation (JBIC), "JBIC FY2001 Survey," 1–57.

64. JETRO, *White Paper*, 2002.

65. International Monetary Fund, *Direction of Trade Statistics Yearbook 2001*.

66. Drysdale, *Reform and Recovery in East Asia*; Haggard, *Political Economy of the Asian Financial Crisis*.

67. Mody and Negishi, "Cross-Border Mergers and Acquisitions."

68. Encarnation, *Rivals Beyond Trade*; Mason and Encarnation, *Does Ownership Matter?*

69. Freund and Djankov, "Which Firms Do Foreigners Buy?"

70. Kim, *East Asia and Globalization*.

71. Noble and Ravenhill, *The Asian Financial Crisis*.

72. Amyx, chap. 9, this volume.

73. For an earlier analysis of why Japanese banks have different interests but were unable to prevail against American proposals for international bank regulation, see Oatley and Nabors, "Redistributive Cooperation."

74. See the managing director's statement to the executive board of the International Monetary Fund, Camdessus, "Statement to Board," 143–44.

75. Katada, chap. 8, this volume.

76. Sakakibara, "End of Market Fundamentalism."

77. For example, Rajan, "Financial and Macroeconomic Co-operation in ASEAN"; Kawai and Akiyama, "Implications of the Currency Crisis"; Kawai and Takagi, "Proposed Strategy."

78. Eddie Toh, "KL Says It Has Access to RM62b Needed to Finance Recovery," *Business Times*, 12 January 1999; Athukorala, "The Malaysian Experiment."

79. Masuyama, "The Role of Japan's Direct Investment," 243–46.

CHAPTER 7

1. This stylistic description ignores the obvious fact that Japanese and U.S. firms also compete on "neutral" courts, especially in Europe.

2. Unless otherwise indicated, "Asia" here is the aggregate of ten economies: China, Hong Kong, South Korea, Taiwan, Singapore, Malaysia, Thailand, Indonesia, the Philippines, and Vietnam. Note that Japan is *not* included in this definition.

3. See World Trade Organization, *International Trade Statistics 2001*.

4. One must be careful not to overdraw this distinction between the automobile and computer peripheral industries. I agree with an anonymous reviewer who notes that computer peripherals, like autos, are commodities that rely on well-developed manufacturing processes. But I also disagree that both industries enjoy a predictable technological trajectory. If this were true, we should expect them both to have relatively long product cycles. In fact, however, the product cycle of computer peripherals (such as HDDs) is notoriously short.

5. Williamson, *Markets and Hierarchies*.

6. The seminal statement is Granovetter, "Economic Action and Social Structure."

7. Fruin, in *Networks, Markets, and the Pacific Rim*, 3, has asserted that business networks are "uncommonly abundant and influential among rapidly growing Pacific Rim economies." Meanwhile, Biggart and Hamilton, in "On the Limits of a Firm-Based Theory to Explain Business Networks," 50–53, argue that these social structures, not utility-maximizing individuals, have organized markets in the region.

8. Gerlach, *Alliance Capitalism*.

9. Ken'ichi and Ikuyo, *Nettowāku Soshiki-ron*.

10. In the 1950s and 1960s, Japanese government bureaucrats encouraged major firms to cement existing ties through intensified cross-shareholding, personnel and technology exchanges, and other forms of mutual "hostage-taking." See Vestal, *Planning for Change*, 53.

11. Economic Planning Agency of Japan, *Kōzō Kaikaku ni Chōsen, Keizai Shakai ni Dainamizumu o*.

12. See Saxenian, *Regional Advantage*; Axelsson, "Supplier Management and Technological Development"; and Brusco, "The Emilian Model."

13. Aldrich and Sakano, "Unbroken Ties," 51.

14. In his pioneering work on "getting a job," Granovetter found that people tend to learn about employment opportunities from more distant rather than closer contacts. His argument makes intuitive sense: individuals tend to congregate in social networks held together by strong ties. Members of such networks tend to know what other members know. To obtain new information, they must rely on weaker ties connecting them to members of other social networks. See Granovetter, "The Strength of Weak Ties," and *Getting a Job*. Burt extends this analysis by introducing the concept of "structural holes" that link nonredundant contacts. See Burt, *Structural Holes*.

15. Håkansson, "Product Development in Networks," 92. Regarding product development, he notes (on p. 91) that the network may "act as a control mechanism. . . . It makes certain changes easier and others more difficult. The resources

are structured in relation to the network and they are more easily mobilized if the development is in accordance with the structure of the network compared to the case when the development implies structural change."

16. Uzzi, "The Sources and Consequences of Embeddedness," 694.

17. Williamson, *Markets and Hierarchies*.

18. See Krugman, "Growing World Trade: Causes and Consequences."

19. Itami, a master of understatement, adds parenthetically that Japanese affiliates in Asia "are not very independent." See Hiroyuki Itami, "Overview," 21. Itagaki offers a helpful explanation for the "strong authority" that Japanese parent companies exercise over their foreign affiliates: "This tendency stems from one particular characteristic of J companies, at home or abroad, which is to rely to a considerable extent on human networks within companies and on information shared by employees, rather than on a standardised and integrated mechanism." See Itagaki, *The Japanese Production System*, 372–73. Although his work is now dated, Yasumuro provides a similar explanation. See Yasumuro, *Kokusai Keiei Kōdōron*.

20. See Sedgwick, "Does Japanese Management Travel in Asia?"

21. In the mid-1990s, Asia attracted as much as 81 percent of all FDI by Japanese small and medium-size firms.

22. Doremus, *The Myth of the Global Corporation*, 3.

23. Northeast Asia has presented a more challenging environment for Japanese automakers. While they gained market power in Taiwan, they did not in South Korea, where the government imposed tight restrictions on both direct investment by foreign manufacturers and the export of CBU (completely built-up, or finished) vehicles from Japan. For all its supposed independence, however, the auto industry in South Korea is deeply dependent on Japan for technology. China is the only Asian country that does not depend heavily on Japan for either capital or technology. But Japanese automakers have recently stepped up investment activity in China, with Mitsubishi Motors opening a new engine factory in Heilongjiang, and Honda tripling its production of passenger cars outside Guangzhou.

24. Fourin, *Tōnan Ajia-Taiwan-Taishū no Jidōsha Buhin Sangyō*. Domestic production here includes the assembly of imported kits, known as CKD (completely knocked down) units.

25. The Timor was a pet project of the former president, who authorized the tariff-free import of vehicles manufactured in South Korea by Kia Motors under a contract with PT Putra Timor Nasional, an Indonesian firm controlled by one of the president's sons.

26. For years, automobile manufacturing has been Indonesia's most highly concentrated industry (along with flour and liquor), according to at least one economic analysis. See Bird, "Concentration in Indonesian Manufacturing, 1975–93," 60.

27. Fourin, *Tōnan Ajia-Taiwan-Taishū*.

28. Nissan and Mitsubishi Motors, the most troubled Japanese firms, were actually rescued by French and German-American automakers (Renault and Daimler-Chrysler, respectively). Mazda and Isuzu also found themselves in need of capital injections, which they received from their leading foreign shareholders—Ford and General Motors, respectively.

29. In 1985, automobile manufacturers in the Philippines collectively produced only twenty thousand vehicles. Even their relatively busy counterparts in Indonesia, which led the ASEAN region in the production of automobiles that year, managed to manufacture only 139,000 units. See Fourin, *Tōnan Ajia-Taiwan-Taishū*. For the sake of comparison, one might note that Japan's domestic production in 1985 reached 12.27 million vehicles (or eighty-eight times Indonesia's total production volume). See Nikkan Jidōsha Shimbunsha, *Jidōsha Sangyō Handobukku, 2000 Nenpan*, 2.

30. Matsuoka, "Accord Drives Change to Asian Carmaking."

31. "Ajia no Jidōsha Sangyō."

32. Nakashima, "Industrial Relations and Ethnicity," 14.

33. Maruyama and Legewie do a good job of describing these schemes, and an even better job of documenting the role of Japanese MNCs in formulating them. See Maruyama, *Ajia no Jidōsha Sangyō*, 27–30; and Legewie, "Driving Regional Integration."

34. Indonesia did not actually agree to participate until 1995.

35. *Kyodo News Service*, 28 April 2001; *China Daily*, 6 March 2002.

36. Legewie, "Driving Regional Integration," 2.

37. It is sometimes difficult to distinguish between Japanese government and business activities in Southeast Asia. Consider this example: in 1991, when Tokyo was still honoring a U.S.-led trade embargo against Hanoi, the Mitsubishi Corporation delivered to Vietnamese officials a "master plan for the automobile industry in the Republic of Vietnam." It recommended various industrial policies and listed the names of numerous auto parts manufacturers—almost all of them Japanese—that could serve as a supply base for the industry. See Hatch and Yamamura, *Asia in Japan's Embrace*, 34–35, 136–37.

38. CLM Working Group (MITI Japan), "Chairman's Summary."

39. Ibid., 2.

40. Interviews, September 1997, Bangkok and Jakarta.

41. The definitive source here is the International Motor Vehicle Program at MIT, located on the Web at [http://web.mit.edu/ctpid/www/imvp]. It was this program that produced Womack, Jones, and Roos, 1990.

42. Interview, Jakarta, 17 September 1997.

43. These data come from Fourin, *Tōnan Ajia-Taiwan-Taishū*.

44. Association directory and interview, Gabungan Industri Alat Mobil & Motor (GIAMM / Indonesia Auto Parts and Components Industries Association), Jakarta, 15 September 1997.

45. Nishioka, "ASEAN ni okeru Jidōsha Sangyō no Dōkō," 66.

46. Kasahara, "Transfer and Adaptation of Manufacturer-Supplier Relationships," 22.

47. Interview with Ozaki Tetsuo, general manager of Asian operations, Nissan Motors, Bangkok, 23 September 1997.

48. Interview with Wisarn Tanthawichian, director of Board of Investment Unit for Industrial Linkage Development, Bangkok, 2 September 1997.

49. "MITI Helps JAMA, JAPIA Send Advisers to Southeast Asia," *Japan Digest*, 20 October 2000; "Joint Programme to Strengthen Auto Parts Suppliers,"

The Nation (Bangkok), 2 February 2000; "Japan to assist streamline of electrical, auto sectors," *Bangkok Post*, 19 September 1997; and Japan Automobile Manufacturers Association, "Dispatch of Experts to Thailand."

50. Ford is perhaps the exception to this rule. In 1998, it began producing one-ton pickups at a $750 million plant in Thailand's Eastern Seaboard Industrial Park. But the U.S. automaker was able to penetrate the Southeast Asian market because it was, even then, closely allied with Mazda.

51. Interview, Bangkok, Thailand, 12 July 1995. For more on Chrysler's experience in Southeast Asia, especially in Thailand, see Yamamura and Hatch, "A Looming Entry Barrier," 15–16.

52. Telephone interview with Ronald Frizzell, president, GM Thailand, 23 September 1997.

53. Until then, the Thai government had demonstrated rather strong favoritism toward the Japanese MNCs that had come to dominate Thailand's automobile industry. One example stands out. In 1991, Chrysler tried to introduce the Jeep Cherokee into Thailand. The Thai government labeled the 4x4 sport utility vehicle a luxury car and imposed a hefty excise tax of 38 percent, even though it had already labeled Mitsubishi's competing 4x4, the Pajero, a pickup truck, thus qualifying it for a lower tax of only 10 percent. U.S. officials ultimately intervened on Chrysler's behalf and managed to persuade Thai officials to give the two utility vehicles equal treatment. But the negotiations dragged on for three years, during which time Mitsubishi enjoyed a substantial price advantage over Chrysler.

54. Thai Board of Investment, "Investment Opportunities Study."

55. *Asahi Shinbun*, 4 January 1995, 9.

56. *Nikkei Weekly*, 20 June 1994, 24.

57. Siam Future Development Company, Ltd. [http://www.siamfuture.com/WorldInThai/isuzu.asp].

58. Thornton, "The Debt That's Dragging Nissan Downhill."

59. *Nikkei Weekly*, 5 October 1998, 19 October 1998, and 21 December 1998; also *Nihon Keizai Shinbun*, 5 February 1998.

60. *Nikkei Weekly*, 15 November 1999.

61. Mikami, "Asia's PC and Semiconductor Industries," 79.

62. Japanese firms are by far the leading producers of audiovisual equipment and many other forms of consumer electronics in the world, not just in Asia. Although Samsung of Korea is a rising challenger, Japanese giants such as Matsushita, Sony, Toshiba, and Hitachi continue to dominate this subsector.

63. Government-affiliated financial institutions, such as the Export-Import Bank of Japan and the Japan Finance Corporation for Small Business, provide low-interest loans to many Japanese firms—including electronics manufacturers—hoping to establish production facilities in Asia. In addition, the Japanese state has used ODA to influence the development of the electronics industry in Asia. For example, in 2001, as part of its $15 billion program to help reduce the "digital divide" in Asia, Tokyo began working with Jakarta to develop IT policies for Indonesia and agreed to set up the Southeast Asia Engineering Education Development Network (SEED-NET) to foster closer professional and research ties between Japanese and Southeast Asian universities.

64. McKendrick, Doner, and Haggard, *From Silicon Valley to Singapore*.

65. Ibid., 98–111.

66. Gourevitch, "Globalization of Production," 305.

67. See Leachman and Leachman, "Trends in Worldwide Semiconductor Fabrication Capacity," 16.

68. See Arnold, "Top Global Semiconductor Companies."

69. Leachman and Leachman, "Trends," 18.

70. McKendrick, Doner, and Haggard, *From Silicon Valley to Singapore*, 105.

71. Borrus, "Resurgence of U.S. Electronics," 71.

72. Ministry of International Trade and Industry, *Wagakuni Kigyō no Kaigai Jigyō Katsudō, Dai 26-Kai*, 213, 220.

73. He also predicts, however, that this characteristic will change as Japanese MNCs acquire greater expertise in operating overseas. See Ernst, "From Partial to Systemic Globalization."

74. Chia, "Singapore," 55.

75. Wong, "Globalization of U.S.-Japan Production Networks," 96.

76. Ibid., 94–95.

77. Tecson, *Hard Disk Drive Industry in the Philippines*.

78. Interview with Hosaka Shuroku, Bangkok, 9 September 1997.

79. Takeuchi, "Comparison of Asian Business."

80. Borrus, "Left for Dead."

81. Like U.S.-based MNCs, then, they became increasingly enmeshed in what one anonymous reviewer of this chapter called "a complex network of networks."

82. Ernst, "From Partial to Systemic Globalization," 30; and Matthews and Cho, *Tiger Technology*, 180–83.

83. Chen and Chen, "Global Production Networks and Local Capabilities," 14.

84. For the development of System LSI (large-scale integrated) circuits, Mitsubishi Electric and Matsushita joined forces in December 1998. For the development of DRAM (Dynamic Random Access Memory) chips, Toshiba and Fujitsu hooked up in December 1998, while NEC and Hitachi hooked up in June 1999. *Yomiuri Shinbun*, June 24, 1999.

85. Ernst, "Partners for the China Circle?," 25.

86. U.S. Embassy, Jakarta, "Indonesia."

87. Fourin, *Kaigai Jidōsha Chōsa Geppō*, 7.

88. China, which joined the World Trade Organization in December 2001, has agreed to eliminate IT tariffs by 2005. As of 2000, the key tariffs were 5 percent for semiconductors and 9 percent for computers.

89. U.S. Embassy, Bangkok, *Country Commercial Guide*; and Japan Research Institute, "Automakers Unveil New ASEAN Strategies."

90. McKendrick, Doner, and Haggard, 30–31.

91. This observation is based on numerous interviews conducted with Commerce Department officials at U.S. embassies throughout Asia in 1995. One offi-

cial even confided that his role was to "put out fires" caused by unsuspecting or undiplomatic U.S. business officials in the region.

CHAPTER 8

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1. Susan Strange, in *Casino Capitalism*, predicted even before the Asian crisis that European and Japanese governments might seek to increase their own financial powers as a means of trying to "nudge" the United States toward less unilateral behavior. See Helleiner, "Still an Extraordinary Power," 240.

2. The most prominent U.S. figure who has taken this position is Alan Greenspan, governor of the U.S. Federal Reserve Board. The reasons for the Asian countries' loss of export competitiveness are as follows. First, it was competition from China, due to its low labor cost and currency devaluation in 1994, in the labor-intensive goods. Second, the rapid depreciation of the Japanese yen vis-à-vis the U.S. dollar curtailed the competitiveness for high-end manufactured goods (especially for South Korea). Finally, Japan's recession shrank export markets. On the other hand, the Asian countries pegged rates to the U.S. dollar under rapid liberalization of the financial sector invited massive foreign capital inflows, much of them used for speculative purposes (especially in Thailand).

3. The term, originally used for the case of the Philippines under Marcos, is now used as a generic term for collusion and corruption that occur in many of Asia's "developmental state"-led economies.

4. DeLong and Eichengreen, "Between Meltdown and Moral Hazard," 45 and n. 63. They argue, "Not surprisingly, financial reform—closing bad banks, recapitalizing the survivors, and strengthening prudential supervision—were key elements of the IMF's crisis programs in Asia."

5. For a recent and influential piece on this view, see Yoshitomi and Shirai, "Technical Background Paper for Policy Recommendations." Some American scholars are sympathetic to this view. See Stiglitz, "Boats, Planes and Capital Flows."

6. Having supported the North American Free Trade Agreement, Clinton's political credibility was at stake. For more discussion on the political dynamics of the Mexican rescue package, see Katada, *Banking on Stability*; and Lustig, "Mexico in Crisis, U.S. to the Rescue."

7. After bypassing the Congress, the Clinton administration faced mounting criticism for its disregard of Congressional concerns and its unilateral conduct of the Mexican rescue. The U.S. Senate passed an amendment to the Treasury Appropriations Bill for fiscal year 1997 that prevented the Clinton administration from committing more than $1 billion in aid in any one year without congressional approval, unless the administration could prove it was vital to U.S. interests. This made it difficult for the administration to provide bilateral financial contributions to Thailand. The amendment expired on September 30, 1997.

8. The second line of defense is a promise in which a central bank of a country in balance-of-payments difficulty could request a loan in reserve currency (usually in U.S. dollars). The central banks of the participating countries then deposit the amount of reserve currency committed to the other party's central bank account. This idea was convenient for both the United States, because the U.S. executive branch could commit a certain amount of money to the financial crisis management of Indonesia and still avoid a major fight with the Congress. Japan Economic Institute of America, *JEI Report*, no. 42B.

9. "Generosity of the United States, Our Great Friend, Is Even More Scarce in Time of Crisis," *Bangkok Matichon*, FBIS, 15 January 1998.

10. For example, *Korean Times*, 20 April 1998; and *Maeil Kyongje Sinmun*, 10 February 1998.

11. David E. Sanger, "U.S. Sees New Villain in Asia Crisis: Tokyo's Leadership," *New York Times*, 22 February 1998.

12. Johnstone, in "Paradigms Lost," notes that "even as Washington denounced Japan's failure to implement domestic reforms, President Clinton publicly praised Beijing for its refusal to devalue the *renminbi* [China's Currency]" (p. 381). He also argues that because China contributed only limited funds to rescue packages ($1 billion each to Thailand and Indonesia) compared to the $80 billion contribution by Japan, the Japanese officials could not swallow the biased attitude of American leaders.

13. Higgott, "Asian Economic Crisis."

14. Ibid., 347.

15. Kikkawa, *Monē Haisen*, 102–52.

16. For the MOF, the collapse of Hyogo Bank and the scandal surrounding Daiwa Bank rocked Japan's financial sector along with corruption charges against MOF officials in 1995. The major case of MOF's mismanagement came at the time of the Jusen (housing loan companies) rescue, which required ¥685 billion of taxpayers' money from FY1996. For the LDP, the temporary loss of its Diet majority in 1993 was only a beginning. The public began to lose confidence in the LDP as it consistently failed to boost the economy over several years. The public was also resentful of the party's collusive relationship with special interests, as well as its misjudgment on Japan's economy, represented by Prime Minister Hashimoto's decision to increase the sales tax from 3 to 5 percent in April 1997 (which halted and reversed Japan's economic upswing).

17. See Katada, *Banking on Stability*, 174–79.

18. In this system, the country fixes its exchange rate per dollar and determines the country's domestic supply of rupiah based on the amount of foreign currency it holds. This system, in effect, makes the country abandon all flexibility on its monetary policy, and provides a full commitment to its fixed exchange rate.

19. *Nihon Keizai Shinbun*, 14 March 1998. Although Washington reportedly feared Japan's "soft" stance vis-à-vis Indonesia, one newspaper speculated that when U.S. envoy Mondale made a several-hour stopover in Tokyo on his way to Jakarta there was consultation between the United States and Japan regarding their respective negotiation strategies with Indonesia (that is, playing good cop and bad cop roles) (*Nihon Keizai Shinbun*, 3 March 1998). Later, the Japanese government

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